

### **Listing and Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1           1. (original)   A method for sampling a digital signal yielding improved jitter  
2 performance within prescribed bandwidth constraints, comprising the steps of:  
3           periodically sampling the digital signal  $n$  times during every interval  $t$ , with  $n$  chosen such  
4 that  $\log_2(n+1)$  is an integer ( $x$ ) greater than zero;  
5           generating a  $x+1$ -bit sample value after each interval  $t$ , the sample value having a first bit  
6 indicating the value of the digital signal being sampled, and  $x$  remaining bits which collectively  
7 indicate a sample interval during which the digital signal changed states if such a change did  
8 occur, and  
9           inverting the first bit of each sample value upon decoding to coincide with the change in  
10 the digital signal.

1           2. (original)   The method according to claim 1 wherein  $n=15$  and  $x$  equals 4.

1           3. (original)   Apparatus for sampling a digital signal yielding improved jitter  
2 performance within prescribed bandwidth constraints, comprising of:  
3           a sample clock for generating  $n$  periodic clock pulses during every interval  $t$ , with  $n$   
4 chosen such that  $\log_2(n+1)$  is an integer ( $x$ ) greater than zero;  
5           a receiver for generating a  $x+1$ -bit sample value after each interval  $t$ , the sample value  
6 having a first bit indicating the value of the digital signal being sampled, and  $x$  remaining bits  
7 which collectively indicate a sample interval during which the digital signal changed states if  
8 such a change did occur, and the receiver inverting the first bit of each sample value upon  
9 decoding to coincide with the change in the digital signal.

1           4. (original)   The apparatus according to claim 1 wherein  $n=15$  and  $x$  equals 4.

1           5 (new)        A method for sampling a digital signal yielding improved jitter  
2 performance within prescribed bandwidth constraints, comprising the steps of:  
3           periodically sampling the digital signal  $n$  times during every interval  $t$ , with  $n$  chosen such  
4 that  $\log_2(n) \leq x$  where  $x$  is an integer;

5 generating a  $x+1$ -bit sample value after each interval  $t$ , the sample value having a first bit  
6 indicating the value of the digital signal being sampled, and  $x$  remaining bits which collectively  
7 indicate a sample interval during which the digital signal changed states if such a change did  
8 occur, and  
9 inverting the first bit of each sample value upon decoding to coincide with the change in  
10 the digital signal.

1 6. (new) The method according to claim 5 wherein  $n=15$  and  $x$  equals 4.

1 7. (new) Apparatus for sampling a digital signal yielding improved jitter  
2 performance within prescribed bandwidth constraints, comprising of:  
3 a sample clock for generating  $n$  periodic clock pulses during every interval  $t$ , with  $n$   
4 chosen such that  $\log_2(n) \leq x$  where  $x$  is an integer  
5 a receiver for generating a  $x+1$ -bit sample value after each interval  $t$ , the sample value  
6 having a first bit indicating the value of the digital signal being sampled, and  $x$  remaining bits  
7 which collectively indicate a sample interval during which the digital signal changed states if  
8 such a change did occur, and the receiver inverting the first bit of each sample value upon  
9 decoding to coincide with the change in the digital signal.

1 8. (new) The apparatus according to claim 7 wherein  $n=15$  and  $x$  equals 4.